

PATENT  
ARK00798215A

#4  
SF  
w/cont  
8/1/99

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Turnbull et al.

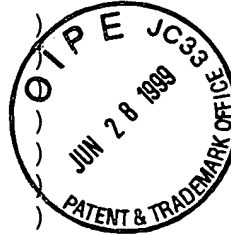
SERIAL NO.: 09/283,569

FILED: 3/31/99

TITLE: CIRCULAR TEMPLATES AND  
METHODS

GROUP ART UNIT: 1635

EXAMINER:



RECEIVED

JUL 2 1999

TECH CENTER 1600/2900

INFORMATION DISCLOSURE STATEMENT

Commissioner of Patents and Trademarks  
Washington, D. C. 20231

Dear Sir:

In compliance with the duty of disclosure set out in 37 C.F.R. §1.56, attached hereto is Form PTO-1449 containing a list of patents or publications for Applicant's Information Disclosure Statement.

Please note the references listed, for example, on pages 11, 12, 29-36, 42, and 44-49, of the present application.

This application is a continuation-in-part of U.S. patent application Serial No. 60/080,198, filed on March 31, 1998.

Applicant respectfully requests consideration of the listed references during examination of the present application.

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Prepaid First Class Mail in an envelope addressed to: Commissioner of Patents & Trademarks, Washington, D.C. 20231 or Assistant Commissioner for Patents, Washington D. C. 20231 on the date indicated below.

Date: 6-25-99  
Mailers: [Signature]

Identification of Person(s) Making This  
INFORMATION DISCLOSURE STATEMENT

RECEIVED

The person making this statement is:

JUL 02 1999

TECH CENTER 1600/2900

(a) \_\_\_\_\_ the inventor(s) who signs below

\_\_\_\_\_  
SIGNATURE OF INVENTOR

\_\_\_\_\_  
Name of Inventor Signing

(b)   X   the attorney who signs below on the basis of:

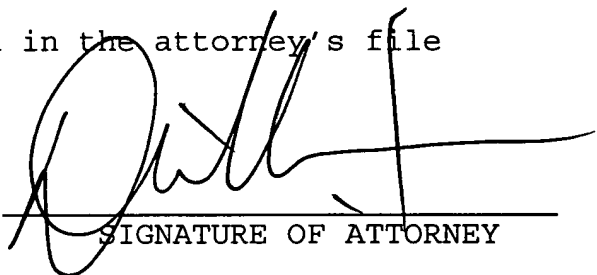
\_\_\_\_\_ the information supplied by the inventor(s)

\_\_\_\_\_ which has been reviewed by the attorney

\_\_\_\_\_ which has not been reviewed by the attorney

  X   the information in the attorney's file

Registration No.: 32,604

  
\_\_\_\_\_  
SIGNATURE OF ATTORNEY

Telephone No. (501) 582-9111

Daniel R. Alexander  
HEAD, JOHNSON & KACHIGIAN  
E. J. Ball Plaza, Suite 230  
112 West Center Street  
Fayetteville, AR 72701

Date: June 25, 1999

Attorneys for Applicant

FORM PTO-1449	Atty. Docket No.: ARK00798215A	Serial No.: 09/283,569
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Applicant: Turnbull et al.	
	Filing Date:	Group Art:
	3/31/99	1635

## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
AA	2,393,999	2/5/46	McCrone	260	326	
AB	2,405,559	8/13/46	Bousquet	260	326	
AC	2,524,145	10/3/50	Tawley	260	313	
AD	5,714,320	2/3/98	Kool	435	6	
AE	5,872,105	2/16/99	Kool	514	44	
AF						
AG						

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
AH						
AI						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AJ	Janardhanam Selvasekaran and Kenneth D. Turnbull, <i>Abstract 104, Modified Nucleic Acids as Templates for Non-Enzymatic Synthesis</i> , 53rd Southwest Regional American Chemical Society Meeting, Tulsa, Oklahoma, 1997.
AK	Janardhanam Selvasekaran and Kenneth D. Turnbull, <i>Chemical Ligation of Oligodeoxyribonucleotides on Circular DNA Templates</i> , PrePrint 1998 Oxford University Press, <i>Nucleic Acids Research</i> , Vol. 26, pgs. 1-5.
AL	Janardhanam Selvasekaran and Kenneth D. Turnbull, <i>Chemical Ligation of Oligodeoxyribonucleotides on Circular DNA Templates</i> , 1999 Oxford University Press, <i>Nucleic Acids Research</i> , 1999, Vol. 27, No. 2, pgs. 624-627.
AM	Kenneth D. Turnbull and Peter B. Dervan, <i>Oligonucleotide Directed Triple Helix Formation with a 1, 2, 4-Triazene C-Nucleoside</i> , 1994 Oxford University Press, <i>Nucleic Acids Research</i> , Vol., pgs. 1-8.

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449	Atty. Docket No.: ARK00798215A	Serial No.: 09/283,569
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Applicant: Turnbull et al.	
	Filing Date:	Group Art:
	3/31/99	1635

## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
AN						

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
AO						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AP	Eugen Uhlmann and Anusch Peyman, <i>Antisense Oligonucleotides: A New Therapeutic Principle</i> , Chemical Reviews, Vol. 90, No. 4, June 1990.
AQ	Yoshiaki Inaki, <i>Synthetic Nucleic Acid Analogs</i> , Prog. Polym. Sci., Vol. 17, 1992, pgs. 515-570.
AR	Yoshiaki Inaki and Kiichi Takemoto, Osaka University, Japan, <i>2.2 Functionality and Applicability of Synthetic Nucleic Acid Analogs</i> , pgs. 79-100.
AS	Rajender S. Varma, <i>Synthesis of Oligonucleotide Analogues With Modified Backbones</i> , Baylor College of Medicine, The Woodlands, Texas, September, 1993, pgs. 621-637.
AT	Serge L. Beaucage and Radhakrishnan P. Iyer, <i>The Functionalization of Oligonucleotides Via Phosphoramidite Derivatives</i> , Tetrahedron Report Number 329, Tetrahedron Vol. 49, No. 10, 1993, pgs. 1925-1963.
AU	Tony L. Hudgens, and Kenneth D. Turnbull, <i>Abstract 309, Development of a DNA Alkylating Reagent</i> , American Chemical Society, 213th ACS National Meeting, San Francisco, CA., April 13-17, 1997.
AV	Kenneth D. Turnbull, Qibing Zhou, and Tony L. Hudgens, <i>Abstract 360, Development of a Reagent for Nucleic Acid Phosphodiester Labeling</i> , 213th ACS National Meeting, San Francisco, CA., April 13-17, 1997.

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449	Atty. Docket No.: ARK00798215A	Serial No.: 09/283,569
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Applicant: Turnbull et al.	
	Filing Date:	Group Art:
	3/31/99	1635

## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
AW						

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
AX						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AY	Dustin L. McMinn, Tracy J. Matray, and Marc M. Grenberg, <i>Abstract 361, Bioconjugate Synthesis Using Protected Oligonucleotides</i> , 213th ACS National Meeting, San Francisco, CA., April 13-17, 1997.
AZ	Kenneth D. Turnbull and Janardhanam Selvasekaran, <i>Abstract 293, Chemical Ligation/Oligomerization of DNA on Modified DNA Templates</i> , American Chemical Society, 215th ACS National Meeting, Dallas, Texas, March 29-April 2, 1998.
BA	Y. Xu, L. Milne, J. Gallagher, C.-h. B. Chen, L. Pearson, D.M. Perrin, and D.S. Sigman, <i>Abstract 294, Gene-Specific Transcription Inhibitors, Oligonucleotides Complementary to the Template Strand of the Transcription Start Site</i> , American Chemical Society, 215th ACS National Meeting, Dallas, Texas, March 29-April 2, 1998.
BB	Carlos I. Martinez, Swanee Jacutin, and Kevin Burgess, <i>Abstract 295, Incorporation of Unnatural Nucleotides by DNA Polymerases</i> , American Chemical Society, 215th ACS National Meeting, Dallas, Texas, March 29-April 2, 1998.
BC	Robert G. Dyer, Lea Ann Jones and Kenneth D. Turnbull, <i>Abstract 89, In Situ Alkylation of Nucleic Acid Phosphodiesterases</i> , 30th Midwest Regional Meeting, American Chemical Society, Nov. 1-3, 1995, Joplin, Missouri, pg. 57.
BD	Jeffery B. Wright and Kenneth D. Turnbull, <i>Abstract 90, A Model System for the Experimental Analysis of <math>\pi</math> <math>\pi</math> Interactions</i> , 30th Midwest Regional Meeting, American Chemical Society, Nov. 1-3, 1995, Joplin, Missouri, pg. 57.

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.